



Figure 1

Figure 2

Alignment of the *CAH* gene from *Myrothecium verrucaria* with a new cyanamide tolerance gene isolated from *Aspergillus* (CAH-H1) and a non-functional yeast *CAH* homolog (CAH-H2)

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CAH          MSSSEVKANGWTAVPVSAKAIVDLSGLGVDVSSYSVEDIAFPAADKLVAEAQAFVKARLS 60
CAH-H1       MCQNEVEVNGWTSMPADAGAI FDGGPFFINVEALSIEEIKFPVDDPIVEKTMRYAKAALP 60
CAH-H2       -----MSQYGFVRVPREVEKAIP-----VVNAPRPRAVVPPNSETARLVREYAAKELT 49
              :.  *:. :* .. .           .:  . : * . . . :.  *.

CAH          PETYNHSMRVFYW-----GTVIARRLLPEQAKDLSPTWALTCLLHD 102
CAH-H1       TETFNHSMRVYYYGMQDCASHGVLINRSQALGMAITKQQFPKQASALSPSTWALTCLLHD 120
CAH-H2       APVLNHSRLRVFY-----SVAIIRDQFP--AWDLQDEVLYVTCLLHD 89
              . .  ***:***: :           . . * : : * * * . . :*****

CAH          VGTAEAYFTSTRMSFDIYGGIKAMEVLK-VLGSSTDQAEAVAEAIIRHEDVGVDGNITFL 161
CAH-H1       IGTSDHNLAATRMSFDIYGGIKALEVLK-GFGATSDQAEAVAEAIIRHQDLGVHGTITYI 179
CAH-H2       IATTDKNMRATKMSFEYYGGILSRELVFNATGGNQDYADAVTEAIIRHQDLTGTYITTL 149
              :.*:: : :*:***: ***** : *::  *.. * *:***:*****:*:  * ** :

CAH          GQLIQLATLYDNVGAYDGDIDFGSWVDDTTRNSINTAFPRHWCSWFACTVRKEESNKPW 221
CAH-H1       GQLIQLATIYDNVGAHPYVKDFGELIHDTTRSQVHEAHPPEWRTFFSGVIQKEQAIKPW 239
CAH-H2       GLILQIATTLDNVGSN-----TDLIHIDTVSAINEQFPRLHWLSCFATVVDTENSRRKPW 203
              * :*:*** *****: . . . * . : : * * : * : . : .*: : ***

CAH          CHTTHIPQ-FDKQMEANTLMKPWE 244
CAH-H1       CHTKKMVN-VLRKGSRHPDGQ--- 259
CAH-H2       GHTSSLGDDFSKKVICNTFGYN-- 225
              ** . : : . : : :.

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Figure 3

Alignment between a new ubiquitin-like promoter (UbiN) and the corresponding part of the sugarcane Ubiquitin-4 promoter.

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Ubi4      AAGCAAACGGTATAGCAACGGTGTAAACCTGATCTAGTGATCTCTTGCAATCCTTAACGG 60
UbiN      AAGCAAAGGGTATGGCAACTGTGTACCGCCCTTCGCTG----CGTG-----TTAACGG 50
          *****  *****  *****  *****  *  *      *      **      *  *      *****

Ubi4      CCACCTACCGCAGGTAGCAAACGGCGTCCCCCTCCTCGATATCTCCGCGGCGACCTCTGG 120
UbiN      CCACCAACCGCAGGTAGCAAACGGCGTGACCTTCCCGAGATCTCCACAGCGAGGTCTGG 110
          *****  *****  *****  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *

Ubi4      CTTTTTCCGCGGAATTGCGCGGTGGGGACGGATTCCACAACCGCGACGCAA-CCGCCTCT 179
UbiN      CTTTTTCCGCCTTCCCG-GAAACCGCGGTGGTTTC----AGCGTGCGGGATTCCCCCTCC 165
          *****      *  *      *  *  *  *  *  *  *  *  *  *  *  *  *  *

Ubi4      CGCGCTGGGCCCCACACCGCTCGGTGCCGTAGCCTCACGGGACTCTTCTCCCTCCTCC 239
UbiN      CACCACCAACCGC-CATAAATACCAGCCCCACCTCACT---CTCTTGCATATCCATC 221
          *  *  *      *  *  *  *      *      ***      *****      *****      ***  *

Ubi4      CCCGTTATAAATTGGCTTCATCCCCTCCTTGCCTC 274
UbiN      CAAATCCCA----GTCCCCAATC----- 240
          *      *      *      *  *  *  *

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Figure 4. GUS-expression in *Agrobacterium*-infected alfalfa seedlings
“- vortex”: subjection by immersing (30 minutes) seedlings into an *Agrobacterium* suspension; “+ vortex” subjection by vortexing (30 minutes) seedlings immersed in an *Agrobacterium* suspension.

